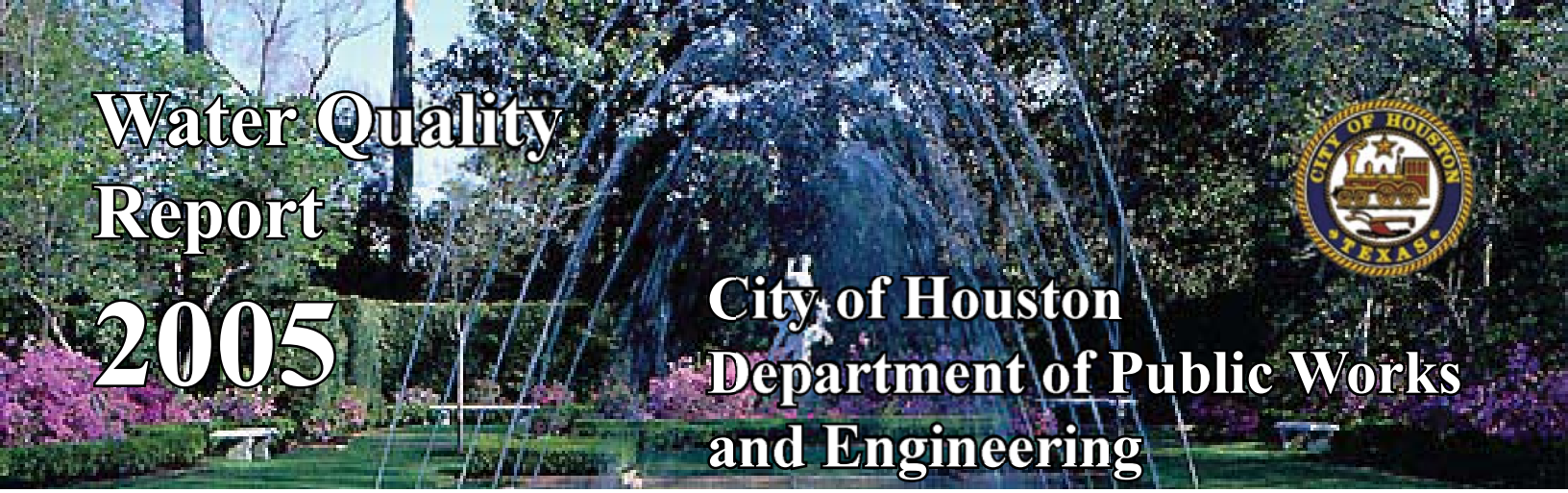


Water Quality Report 2005

City of Houston Department of Public Works and Engineering

The City of Houston Department of Public Works and Engineering (PWE) is pleased to present its 2005 Annual Water Quality Report. The report describes the City of Houston's water supply and water quality and contains other important information regarding the water we deliver to your tap. As in past years, PWE supplied water to our 3 million customers in 2005 that met or exceeded all health-based drinking water standards. These standards are set by the U.S. Environmental Protection Agency (EPA) and the Texas Commission on Environmental Quality (TCEQ).

Source of Drinking Water

The sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and in some cases, radioactive materials, and can pick up substances resulting from the presence of animal or human activity.

City of Houston Water Sources

The total production from all sources averaged 383 million gallons per day (MGD) in 2005. The City currently draws 71% of its treated drinking water from its three major surface water treatment plants. Surface water comes from the San Jacinto River through Lake Conroe and Lake Houston, and the Trinity River, through Lake Livingston. The remaining 29% comes from 144 permitted wells at 87 separate groundwater plants. These are deep wells with average depth greater than 750 feet, producing water from the Evangeline and Chicot Aquifers, and are not vulnerable to surface contamination. The TCEQ completed a Source Water Assessment for the City of Houston, and results indicate that some of our sources are susceptible to certain contaminants. The sampling requirements for our water system are based on this susceptibility and previous sample data. Any detection of these contaminants will be found in the Report. For more information on source water assessments and protection efforts, please call 713-842-4001.

What about arsenic levels?

While our drinking water meets the EPA's standard for arsenic, it does contain very low levels of naturally occuring arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the cost of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems. Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system and may have an increased risk of getting cancer. PWE continually works to reduce the level of arsenic. We have recently completed construction of the Northeast Water Purification Plant (NEWPP) along with a 55,000 ft. long 66-in. water line to supply treated surface water to the Greenspoint area. We continually monitor groundwater wells for arsenic levels and decommission the wells that exceed regulatory standards. The MCL for arsenic decreased from 50 ppb to 10 ppb on January 23, 2006.

En Español

Este informe contiene información muy importante sobre de su aqua que bebe. Tradúzcalo, ó hable con alguien que lo entiende. Para mas información por favor llame Linea de Ayuda de Houston marcando 311.

Is *Cryptosporidium* or *Giardia* in our water supply?

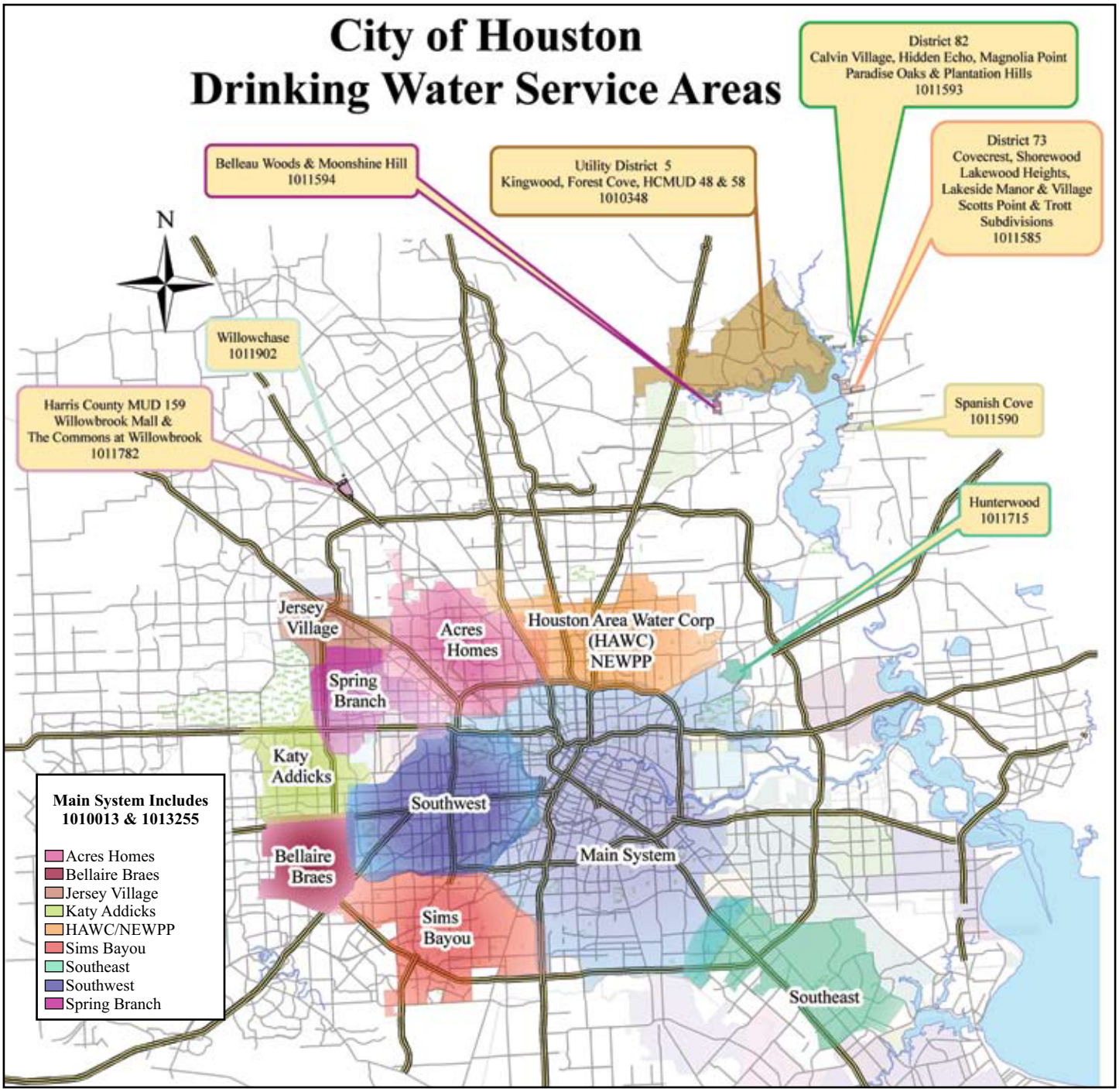
Cryptosporidium and *Giardia* are waterborne pathogenic organisms. Both are naturally present in the intestines of most mammals including humans, and are passed into the environment through urban runoff or sewage disposal system failure. The diseases caused by *Cryptosporidium* or *Giardia* can lead to symptoms such as diarrhea, abdominal discomfort, fever, weight loss, malabsorption, or anemia. Although not life threatening to healthy adults, *Cryptosporidium* and *Giardia* can be fatal to infants, the elderly, pregnant women, and immunocompromised persons.

Neither *Cryptosporidium* nor *Giardia* is found in deep wells such as the City's, which are protected from surface water contamination. Since 1993, we have been routinely monitoring our source water entering and treated water leaving our filtration plants for these two organisms. To date, we have detected no confirmed occurrences of either organism in any of our drinking water.

For more information about *Cryptosporidium*, *Giardia* and other microbial contaminants, contact the EPA's Safe Drinking Water Hotline at 1-800-426-4791.

Public Utilities Mission Statement:

To be the Nation's Leading Public Utility, Champion for the Environment, Providing Reliable Service of Exceptional Quality to the Most Satisfied Customers in the Nation.



Microbiological and Physical Quality*					
CONTAMINANT (units)	**MCLG**	**MCL**	**MAIN SYSTEM**	**UTILITY DISTRICT 5**	**SOURCES OF CONTAMINANTS**
Total Coliforms	0	5% of monthly samples tested positive	2.5% Highest percentage of monthly samples	ND	Naturally present in the environment
E. Coli	0	0	ND	ND	Human and animal fecal waste
Viruses, Giardia, Legionella	0	TT	ND	ND	Naturally present in the environment
Turbidity (clarity) (NTU) Main System - Surface Water	N/A	95% of samples tested each month less than or equal to 0.3	0.05 Average Range = < 0.01 - 0.18 100% was the Lowest monthly percentage of samples meeting the limit	N/A	Soil runoff

*** Calendar Year 2005 data unless otherwise specified.**
**** Includes groundwater and surface water sites.**
***** EPA considers 50 picocuries per liter to be the level of concern for beta particles.**
****** MCL conpliance is based on annual average of samples.**

MAIN WATER SYSTEM* *(Most City of Houston customers receive their drinking water from the Main System.)*								
CONTAMINANT (units)	**MCLG**	**MCL**	**SURFACE WATER 1010013**		**HOUSTON AREA WATER CORP. (HAWC) 1013255**	**GROUND WATER 1010013**		**SOURCES OF CONTAMINANTS**
			Avg	**Max**		**Avg**	**Max**	
Alpha Emitters (pCi/L)	0	15****	3.9	10.8	< 2.0	6.5	20.7	Erosion of natural deposits
Arsenic (ppb)	0	50	< 2.0	5.8	< 2.0	5.0	19.5	Erosion of natural deposits
Atrazine (ppb)	3	3	0.27	0.40	ND	< 0.20	< 0.20	Runoff from herbicide used on row crops; commonly found in surface water at low levels
Barium (ppm)	2	2	0.0839	0.2010	0.076	0.2326	0.4000	Discharge of drilling wastes; erosion of natural deposits
Benzene (ppb)	0	5	< 0.5	< 0.5	ND	< 0.5	0.6	Discharge from factories; leaching from gas storage tanks and landfills
Beta/Photon Emitters (pCi/L)	0	50***	5.6	16.2	< 4.0	4.9	12.8	Decay of natural or man made deposits
Copper (ppm)	1.3	90% below AL = 1.3	90% below 0.1920 at customer tap - none exceeded AL**		ND	90% below 0.1920 at customer tap - none exceeded AL**		Erosion of natural deposits; corrosion of household plumbing
Ethylbenzene (ppb)	700	700	< 0.5	< 0.5	ND	< 0.5	2.8	Discharge from petroleum refineries
Fluoride (ppm)	4.0	4.0	0.6	0.8	0.1	0.3	1.3	Water additive which promotes strong teeth; erosion of natural deposits
Lead (ppb)	0	90% below AL = 15	90% below 4.2 at customer tap - none exceeded AL**		ND	90% below 4.2 at customer tap - none exceeded AL**		Erosion of natural deposits; corrosion of household plumbing
Nitrate (ppm), as N	10	10	0.67	1.18	0.45	0.10	0.61	Runoff from fertilizer use; erosion of natural deposits
Nitrite (ppm), as N	1	1	< 0.01		0.45	N/A		Runoff from fertilizer use; erosion of natural deposits
Selenium (ppb)	50	50	< 3.0	5.9	< 3.0	< 3.0	18.7	Erosion of natural deposits
Toluene (ppm)	1	1	< 0.0005		ND	< 0.0005	0.0037	Discharge from petroleum factories
Combined Radium (pCi/L)	0	5	< 1.0	3.8	< 1.0	< 1.0	2.7	Erosion of natural deposits
Combined Uranium (ppb)	0	30	17.1		ND	12.2	13.1	Erosion of natural deposits
Total Xylenes (ppm)	10	10	< 0.0015	0.0019	ND	< 0.0015	0.0228	Discharge from petroleum factories; discharge from chemical factories

Terminology

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.
Unregulated Contaminants: Unregulated contaminants are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

Measurement Definitions

Nephelometric Turbidity Unit (NTU): Turbidity is a measure of how clear the water looks.
N/A: Not Applicable
ND: Not Detected

pCi/L: picocuries per liter (a measure of radioactivity)
ppm: 1 part per million = 1 mg/L = 1 milligram per liter
ppb: 1 part per billion = 1 ug/L = 1 microgram per liter
1 ppm =1000 ppb

ISOLATED GROUNDWATER SYSTEMS*									
CONTAMINANT (units)	**MCLG**	**MCL**	**BELLEAU WOODS 1011594**	**SPANISH COVE 1011590**	**DISTRICT 82 1011593**		**HARRIS COUNTY MUD 159 1011782**		**SOURCES OF CONTAMI-NANTS**
					Avg	**Max**	**Avg**	**Max**	
Alpha Emitters (pCi/L)	0	15	ND	ND	2.9 (2001)	3.2 (2001)	6.2 (2003)		Erosion of natural deposits
Arsenic (ppb)	0	50	ND	2.9	ND		2.2 (2003)		Erosion of natural deposits
Barium (ppm)	2	2	0.292 (2001)	0.3350	0.139 (2004)		0.257 (2003)		Discharge of drill-ing wastes; erosion of natural deposits
Beta/Photon Emit-ters (pCi/L)	0	50***	ND	5.8 (2001)	ND		ND		Decay of natural or man made deposits
Copper (ppm)	1.3	90% be-low AL = 1.3	90% below 0.081 at cus-tomer tap-none exceeded AL (1999)	90% below 0.002 at cus-tomer tap-none exceeded AL (2003)	90% below 0.043 at cus-tomer tap-none exceeded AL (2000)		90% below 0.257 at cus-tomer tap-none exceeded AL (1999)		Erosion of natural deposits; corrosion of household plumbing
Ethylbenzene (ppb)	700	700	< 0.5	ND	ND		ND		Discharge from petroleum refineries
Fluoride (ppm)	4.0	4.0	ND	0.1	ND		ND		Water additive which promotes strong teeth; erosion of natural deposits
Lead (ppb)	0	90% be-low AL = 15	90% below 2.1 at cus-tomer tap-none exceeded AL (1999)	90% below 1.0 at cus-tomer tap-none exceeded AL (2003)	90% below 1.4 at cus-tomer tap-none exceeded AL (2000)		90% below 3.8 at cus-tomer tap-none exceeded AL (1999)		Erosion of natural deposits; corrosion of household plumbing
Nitrate (ppm), as N	10	10	ND	< 0.01	0.17		0.21	0.22	Runoff from fertil-izer use; erosion of natural deposits
Selenium (ppb)	50	50	ND	< 3.0	ND		3.9 (2003)		Erosion of natural deposits
Total Trihalometh-anes (TTHMs) (ppb)	N/A	Running Annual Avg=80	7.9	< 8.0	4.6	9.2	< 8.0		By-product of drinking water disinfection
Toluene (ppm)	1	1	< 0.0005	ND	ND		ND		Discharge from petroleum factories
Combined Radium (pCi/L)	0	5	ND	ND	< 1.0 (2004)		0.4 (2003)		Erosion of natural deposits
Total Xylenes (ppm)	10	10	< 0.0015	ND	ND		ND		Discharge from petroleum facto-ries; discharge from chemical factories

Customer Service is Our Number 1 Priority!

We take pride in the water that is provided to our customers and we are continually striving to improve our service to you. To accomplish this goal … we need your help. Any time you find your water's quality below your expectations, please contact us through the "Houston Help Line" by calling 311. We will respond promptly and professionally.

ISOLATED GROUNDWATER SYSTEMS*										
CONTAMINANT (units)	**MCLG**	**MCL**	**UTILITY DISTRICT 5 1010348**		**HUNTERWOOD 1011715**	**WILLOWCHASE 1011902**		**DISTRICT 73 1011585**		**SOURCES OF CONTAMINANTS**
			Avg	**Max**		**Avg**	**Max**	**Avg**	**Max**	
Alpha Emitters (pCi/L)	0	15	2.9	5.0	ND	4.3 (2002)	8.6 (2002)	5.2 (2002)	6.2 (2002)	Erosion of natural deposits
Arsenic (ppb)	0	50	< 2.0		7.4 (2003)	2.2 (2003)		< 2.0		Erosion of natural deposits
Barium (ppm)	2	2	0.252		0.276 (2003)	0.246 (2002)		0.2755	0.3090	Discharge of drilling wastes; erosion of natural deposits
Beta/Photon Emitters (pCi/L)	0	50***	< 4.0	7.1	2.5 (2003)	< 4.0 (2000-2002)	4.3 (2000-2002)	4.6 (2002)	4.7 (2002)	Decay of natural or man made deposits
Copper (ppm)	1.3	90% below AL = 1.3	90% below 0.2440 at customer tap-none exceeded AL		90% below 0.15 at customer tap-none exceeded AL (2000)	90% below 0.1620 at customer tap-none exceeded AL		90% below 0.1190 at customer tap-none exceeded AL (1999)		Erosion of natural deposits; corrosion of household plumbing
Ethylbenzene (ppb)	700	700	1.2	7.2	ND	ND		0.8	1.5	Discharge from petroleum refineries
Fluoride (ppm)	4.0	4.0	0.3		0.5 (2000)	0.1		0.1		Water additive which promotes strong teeth; erosion of natural deposits
Lead (ppb)	0	90% below AL = 15	90% below 2.2 at customer tap-none exceeded AL		90% below 4.0 at customer tap-one exceeded AL (2000)	90% below 3.2 at customer tap-none exceeded AL		90% below 2.2 at customer tap-one exceeded AL (1999)		Erosion of natural deposits; corrosion of household plumbing
Nitrate (ppm), as N	10	10	< 0.01		< 0.01	0.19		0.02	5.7	Runoff from fertilizer use; erosion of natural deposits
Selenium (ppb)	50	50	< 3.0		ND	3.8 (2002)		< 3.0	5.7	Erosion of natural deposits
Total Trihalomethanes (TTHMs) (ppb)	N/A	Running Annual Avg=80	1.3	12.8	< 8.0	2.4		< 8.0		By-product of drinking water disinfection
Toluene (ppm)	1	1	0.0011	0.0063	ND	ND		ND		Discharge from petroleum factories
Combined Radium (pCi/L)	0	5	1.0	1.1	ND	0.4 (2002)		0.6 (2002)	0.7 (2002)	Erosion of natural deposits
Total Xylenes (ppm)	10	10	0.0042	0.0240	ND	ND		0.0040	0.0079	Discharge from petroleum factories; discharge from chemical factories

Water Security

To ensure the safety and security of the City of Houston's water infrastructure and treatment facilities, we are in the process of implementing a variety of upgrades. These upgrades include double fencing with barbed wire, closed circuit cameras along the perimeter, gate guards, armed patrols and security barriers.

Unregulated Contaminants*													
CONTAMINANT (units)	MAIN SYSTEM SURFACE		HOUSTON AREA WATER CORP. (HAWC)	MAIN SYSTEM GROUND		BELLEAU WOODS	WILLOW-CHASE	UTILITY DISTRICT 5		DISTRICT 73		SPANISH COVE	HARRIS COUNTY MUD 159
	Avg	Max		Avg	Max			Avg	Max	Avg	Max		
Chloroform (ppb)	12.7	18.0	2.2	< 0.5	3.9	0.8	< 0.5	9.2	54.0	1.8	3.5	< 0.5	< 0.5
Bromodichloromethane (ppb)	7.1	13.0	< 0.5	1.1	25.0	1.5	< 0.5	6.2	35.0	3.4	6.8	< 0.5	< 0.5
Dibromochloromethane (ppb)	2.6	4.9	< 0.5	1.0	17.0	2.0	< 0.5	1.5	6.3	2.6	5.2	< 0.5	< 0.5
Bromoform (ppb)	< 0.5	2.8	< 0.5	< 0.5	4.5	1.3	< 0.5	< 0.5	1.4	< 0.5		< 0.5	< 0.5
4-methyl-2-pentanone (MIBK) (ppb)	ND		ND	1.3	38.0	ND	ND	4.2	25.0	ND		ND	ND
1,2,4-Trimethylbenzene (ppb)	ND		ND	< 1.0	1.5	ND	ND	ND		ND		ND	ND
Acetone (ppb)	ND		ND	< 10	45.0	30.0	ND	2.5	15.0	ND		ND	ND
2-Hexanone (ppb)	ND		ND	ND		ND	ND	< 1.0	2.2	ND		ND	ND

Disinfection By-Products and Disinfectants* Main System Surface Water			
	HALOACETIC ACIDS - HAAS (ppb)	TOTAL TRIHALOMETHANES TTHMS (ppb)	CHLORAMINES/FREE CHLORINE (ppm)
MCL	60 as Running Annual Average (RAA) of quarterly samples in distribution system	80 as Running Annual Average (RAA) of quarterly samples in distribution system	MRDL = 4 as Running Annual Average (RAA) of daily distribution system samples
MCLG	N / A	N / A	MRDLG = 4
Average of all sampling points	9.2	11.2	Average Free Chlorine = 1.3 Average Chloramine = 2.1
Range of detected levels	< 6.0 - 32.0	< 8.0 - 98.7	0.0 - 3.4
Source of Constituent	By-product of drinking water disinfection	By-product of drinking water disinfection	Disinfectant used to control microbes

Drinking Water and Your Health

Notice from the EPA

All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. Contaminants may be found in drinking water that may cause taste, color, or odor problems. Presence of contaminants does not necessarily indicate that the water poses a health risk. In order to ensure that tap water is safe to drink, the EPA and the TCEQ enforce regulations that limit the amount of certain contaminants in water provided by public water systems. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline 1-800-426-4791.

Health-Related Notices

Special Notice for the Elderly, Infants, Cancer Patients, People with Weakened Immune Systems

You may be more vulnerable to certain microbial contaminants in drinking water than the general population. Infants, some elderly or immunocompromised persons such as those who have undergone chemotherapy for cancer, those who have undergone organ transplants, those who are undergoing treatment with steroids, and people with HIV/AIDS or other immune system disorders can be particularly at risk from infections. You should seek advice about drinking water from your physician or health care provider. Additional guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from:

Safe Drinking Water Hotline 1-800-426-4791 or City of Houston Department of Health and Human Services/Bureau of Epidemiology 713-794-9181.

If other people, such as tenants, receive water from you, it is important that you provide this notice to them by posting it in a prominent location or by hand or mail delivery.
Please feel free to copy this report. Visit our web site:
www.publicworks.cityofhouston.gov/utilities/waterprod.htm